

RICE UNIVERSITY

**Grand Variations for large orchestra**

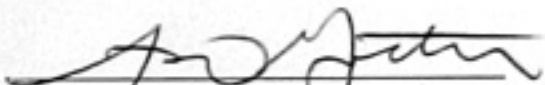
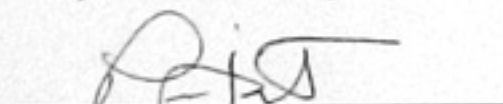


by

**Daniel James Zajicek**

A THESIS SUBMITTED  
IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE

**Doctor of Music**

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## ABSTRACT

### **Grand Variations for large orchestra**

by

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*Grand Variations* is a work for large orchestra built on an original theme and six variations. My primary concerns when composing were communication, continuity, and distortion. To musically communicate an idea repetition is essential, and the type of repetition presented in theme and variations provided what I was looking for. In addition, the fact that the theme will be repeated over and over leads to a built in continuity. The final concern, distortion, may be achieved by pulling away from a more straightforward presentation of the thematic material.

Two additional elements played a large role in the work—cyclic forms, and quantum physics. The composition *Déserts* by Edgard Varese, and the jazz work *Nefertiti* by Wayne Shorter, both contain strong cyclic features. *Nefertiti* uses the same melody repeated over and over, while *Déserts*, on the other hand, repeatedly presents the same musical gestures, and sound objects, but with slight changes to achieve its own cyclic sound world. These two works framed the way that I approached variations, yet are at odds with each other. Through my reading of quantum physics, I found a way to join the two into a working structure, and the book, *The Grand Design*, by Stephen Hawking and Leonard Mlodinow, helped me to do it. Because of this, I decided early on to honor that influence, and the title *Grand Variations* reflect that.

# Grand Variations

for orchestra

**Daniel Zajicek**  
2012

# Instrumentation

Piccolo  
2 Flutes  
2 Oboes  
English horn in F  
2 Clarinets in B<sup>b</sup>  
Bass clarinet in B<sup>b</sup>  
Bassoon  
Contrabassoon

4 Horns in F  
3 Trumpets in C  
Flugelhorn in B<sup>b</sup>  
2 Trombones  
Bass Trombone  
Tuba

Timpani - 23", 32"

Percussion 1  
vibraphone, metal wind chimes, snare drum,  
wood block, suspended cymbal, xylophone,  
tam tam, bass drum, crash cymbals

Percussion 2  
glockenspiel, wood block, bass drum,  
4 tom-toms, triangle, snare drum

Harp

Violins I  
Violins II  
Violas  
Cellos  
Contrabasses

**Duration: 8 min.**

**Note on transpositions:**

All octave transpositions for piccolo, contrabassoon,  
contrabass, xylophone, and glockenspiel are still in effect.

Theme M. ♩ = 92

Piccolo

2 Flutes

2 Oboes

English Horn

2 Clarinets

Bass Clarinet

Bassoon

Contrabassoon

Horns 1, 3

Horns 2, 4

3 Trumpets

Flugelhorn

Trombones 1, 2

Bass Trombone

Tuba

Timpani

Percussion 1

Percussion 2

Harp

Violins I

Violins II

Violas

Cellos

Contrabasses

1.

*mp* *mf* *mp* *pp* *p* *pp*

solo

*mf* *f* *mf* *f* *mp* *p* *mp*

vibraphone

*mf*

*p*

Theme M. ♩ = 92

*pp* *mp* *pp* *ppp* *pp*

*pp* *mp* *pp* *ppp* *pp*

*pp* *mp* *pp* *ppp* *pp*

*pp* *mp* *p* *ppp* *pp*

*pp* *mp* *p* *ppp* *pp*

**Faster, more urgent** M. ♩ = 100

12

Faster, more urgent M. = 100

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

12

Timp.

Glockenspiel

Harp

A

Faster, more urgent M. = 100

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

12

22

Picc.

2 Fl.

2 Ob.

2.  
*mf* > *mp*

E. Hn.

*mf* > *mp*

2 Cl.

B. Cl.

Bsn.

*f*

C. Bn.

*mf* > *f* > *mp*

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

(ens.)  
*f* > *mf*

Tbn. 1, 2

1.  
*mf* > *f* > *mp*

B. Tbn.

*mf* > *f* > *mp*

Tuba

*mf* > *f* > *mp*

22

Timp.

*mf* > *f* > *mp* > *mf* > *p*

Harp

Vlns. I

*pp*

Vlns. II

*pp*

Vls.

*pp*

Vcs.

*pp*

Cbs.

*pp*

22

*pp*

*mf* < *f* > *mp*

B

32 Variation I, Expanding the singularity M. ♩ = 80

Picc.

2 Fl.

2 Ob. *1.* *pp* < *p* < *mp* > *pp* *1.* *p* ————— *f*

E. Hn.

2 Cl. *1.* *p* ————— *mp* > *p*

B. Cl.

Bsn. *2.* *ppp* < *p* < *mf* > *p*

C. Bn.

Hn. 1, 3 *3.* + *ppp* < *p* < *mf* > *pp*

Hn. 2, 4

3 Tpt. *1. solo* *p* < *mf* > *p* *con sord.* *1. (ens.) con sord.* *p* < *mp* > *p* *senza sord.*

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba *pp*

32

Timp.

metal wind chimes *1.v.*

Harp

B

Variation I, Expanding the singularity M. ♩ = 80

Vlns. I *p* ————— *f*

Vlns. II

Vls. *ppp* < *p* < *mf* > *p*

Vcs. *uni.* *ppp* < *p* < *mf* > *pp*

Cbs. *p*

32



This page of a musical score contains staves for the following instruments:

- Picc.
- 2 Fl.
- 2 Ob.
- E. Hn.
- 2 Cl.
- B. Cl.
- Bsn.
- C. Bn.
- Hn. 1, 3
- Hn. 2, 4
- 3 Tpt.
- Flhn.
- Tbn. 1, 2
- B. Tbn.
- Tuba
- Timp.
- vibraphone
- Harp
- Vlns. I
- Vlns. II
- Vls.
- Vcs.
- Cbs.

The score includes various musical notations such as notes, rests, and dynamic markings (e.g., *mp*, *mf*, *p*, *pp*, *f*, *fp*). A rehearsal mark 'C' is present in the upper right and lower right sections. The page number '46' is circled in the top left and bottom left corners.



75

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

75

Timp.

snare drum

Harp

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

75

E

87

Variation II, Galactic collisions M. ♩ = 108

Picc. *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

2 Fl. *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

2 Ob. *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

E. Hn. *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

2 Cl. *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

B. Cl. *p* *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

Bsn. *p* *fp* *f* *p* *ff* *p* < *mf* *mp* < *ff*

C. Bn. *p* *fp* *f* *p* *ff* *p* < *mf* *mp* < *ff*

Hn. 1, 3 *p*

Hn. 2, 4 *p*

3 Tpt. *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

Flhn. *p* < *mf* *mp* < *f* *ff*

Tbn. 1, 2 *p* *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

B. Tbn. *p* *fp* *f* *p* *ff* *p* < *mf* *mp* < *ff*

Tuba *p* *fp* *f* *p* *ff* *p* < *mf* *mp* < *ff*

87

Timp. *f* *f* *f* *f* *f* *f*

snare drum  
snare off

bass drum *p* < *f* *f* *f* *pp* *f* *f*

Harp

E

Variation II, Galactic collisions M. ♩ = 108

Vlins. I *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

Vlins. II *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

Vls. *fp* *f* *p* *p* < *mf* *mp* < *f* *ff*

Vcs. *p* *fp* *f* *p* *ff* *p* < *mf* *mp* < *ff* *ff*

Cbs. *p* *fp* *f* *p* *ff* *p* < *mf* *mp* < *ff* *ff*

87



G

108 Variation III, Stardust memory M. ♩. = 80

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

108

Timp.

4 Tom-Toms

Harp

G

Variation III, Stardust memory M. ♩. = 80

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

108

119

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

119

Timp.

4 Tom-Toms

Harp

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

119

131

I

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

131

Timp.

bass drum

Harp

I

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

131



144

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

144

Timp.

xylophone

susp. cymb.

4 Tom-Toms

vibraphone

Harp

Vlins. I

Vlins. II

Vls.

Vcs.

Cbs.

144

J

Var. IV, Distant points of light M. ♩ = 58

155

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

Timp.

triangle

tam tam

vibraphone

Harp

J

Var. IV, Distant points of light M. ♩ = 58

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.





169

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

169

Timp.

snare drum

Harp

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

169



M

178

Variation V, Dreamy and expressive M. ♩ = 40

Picc. *p* *mp* *p* *mp* *f* *mp*

2 Fl. *p* *mp* *p* *mp* *f* *mp*

2 Ob. 1. *p* *mp* *p* *mp* *f* *mp*

E. Hn. *p* *mp* *p* *mp* *f* *mp*

2 Cl. *p* *mp* *p* *mp* *f* *mp*

B. Cl.

Bsn. *p* *mp* *p* *mp* *f* *mp*

C. Bn. *mp* *f* *mp*

Hn. 1, 3 *mp* *mp* *mf*

Hn. 2, 4 *mp* *mp* *mf*

3 Tpt.

Flhn. *mp* *mp* *mf*

Tbn. 1, 2 1. *p*

B. Tbn. *mp* *mf*

Tuba *mp*

178

Timp.

Harp

M

Variation V, Dreamy and expressive M. ♩ = 40

Vlns. I *mf* *f* *mp* *div.*

Vlns. II *mf* *f* *mp*

Vls. *p* *mf* *f* *mp*

Vcs. *mf* *f*

Cbs. *mp* *f*

178

184

N

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

184

Timp.

vibraphone

Harp

N

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

184



194

202

*a tempo*

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

202

Timp.

susp. cymb.

snare drum

Harp

*a tempo*

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

uni.

208

P

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

208

Timp.

susp. cymb.

l.v.

snare drum

Harp

P

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

208

212

Picc.

2 Fl. *a2*

2 Ob.

E. Hn.

2 Cl. *1.*

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

212

Timp.

*mf* 4 Tom-Toms

*mf*

bass drum

susp. cymb. *l.v.*

*mp*

*mp*

*f*

*l.v.*

*mf*

Harp

Vlns. I

Vlns. II

Vls. *uni.*

Vcs.

Cbs.

212

216

Picc.

2 Fl.

2 Ob.

E. Hn.

2 Cl.

B. Cl.

Bsn.

C. Bn.

Hn. 1, 3

Hn. 2, 4

3 Tpt.

Flhn.

Tbn. 1, 2

B. Tbn.

Tuba

216

4 Tom-Toms

bass drum

susp. cymb.

snare drum

l.v.

Harp

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

216

222

222

Timpani (Timp.)

Snare Drum

Harp

Vlns. I

Vlns. II

Vls.

Vcs.

Cbs.

222

This page of the musical score, numbered 226, contains the following staves and parts:

- Picc.** (Piccolo): Treble clef, dynamic *mf*.
- 2 Fl.** (Flute 2): Treble clef, dynamic *mf*.
- 2 Ob.** (Oboe 2): Treble clef, dynamic *mf*.
- E. Hn.** (Euphonium): Treble clef, dynamic *mf*.
- 2 Cl.** (Clarinet 2): Treble clef, dynamic *mf*.
- B. Cl.** (Bass Clarinet): Bass clef, dynamic *mf*.
- Bsn.** (Bassoon): Bass clef, dynamic *mf*.
- C. Bn.** (Contrabassoon): Bass clef, dynamic *mf*.
- Hn. 1, 3** (Horn 1, 3): Treble clef, no dynamic.
- Hn. 2, 4** (Horn 2, 4): Treble clef, no dynamic.
- 3 Tpt.** (Trumpet 3): Treble clef, dynamic *f* and *mf*.
- Flhn.** (Flugelhorn): Treble clef, no dynamic.
- Tbn. 1, 2** (Trombone 1, 2): Bass clef, dynamic *mf*.
- B. Tbn.** (Baritone Trombone): Bass clef, dynamic *mf*.
- Tuba**: Bass clef, dynamic *mf*.
- Timp.** (Timpani): Bass clef, no dynamic.
- 4 Tom-Toms**: Percussion, dynamic *mf*.
- Harp**: Grand staff, dynamic *mf*.
- Vlins. I** (Violin I): Treble clef, dynamic *mf*.
- Vlins. II** (Violin II): Treble clef, dynamic *mf*.
- Vls.** (Viola): Bass clef, dynamic *mf*.
- Vcs.** (Cello): Bass clef, dynamic *mf*.
- Cbs.** (Double Bass): Bass clef, dynamic *mf*.

The score includes a rehearsal mark 'R' at the top right and bottom right. Dynamic markings include *mf*, *f*, *mp*, and *p*. The page number 226 is circled at the top left and bottom left.

This image shows a page of a musical score, likely for a symphony, featuring multiple staves for various instruments. The score is written in a standard musical notation style, including notes, rests, and dynamic markings.

The instruments listed on the left side of the page are:

- Picc.
- 2 Fl.
- 2 Ob.
- E. Hn.
- 2 Cl.
- B. Cl.
- Bsn.
- C. Bn.
- Hn. 1, 3
- Hn. 2, 4
- 3 Tpt.
- Flhn.
- Tbn. 1, 2
- B. Tbn.
- Tuba
- Timp.
- Perc.
- Harp
- Vlns. I
- Vlns. II
- Vls.
- Vcs.
- Cbs.

The score includes a rehearsal mark "230" at the top left. The music is written in a key signature of one flat (B-flat) and a common time signature (C). The dynamics range from *ff* (fortissimo) to *p* (piano). The score is a page from a larger manuscript, as indicated by the page number "230" at the bottom left.



235

Picc. *mf* *fp* *ff*

2 Fl. *mf* *fp* *ff*

2 Ob. *mf* *fp* *ff*

E. Hn. *fp* *ff*

2 Cl. *mf* *fp* *ff*

B. Cl. *fp* *ff*

Bsn. *mf* *fp* *ff*

C. Bn. *mf* *fp* *ff*

Hn. 1, 3 *p* *fp* *ff*

Hn. 2, 4 *p* *fp* *ff*

3 Tpt. *p* *fp* *ff*

Flhn. *p* *mf* *ff*

Tbn. 1, 2 *p* *fp* *ff*

B. Tbn. *p* *fp* *ff*

Tuba *p* *fp* *ff*

235

Timp. *fp* *ff* crash cymb.

Perc. *mf* *p* *fp* *ff*

Harp *mf* *p* *f* *mp* *gliss.* *gliss.* *ff*

Vlns. I *mp* *fp* *ff*

Vlns. II *mp* *fp* *ff*

Vls. *mp* *fp* *ff*

Vcs. *mp* *fp* *ff*

Cbs. *mp* *fp* *ff*

235